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EXAMINER

PHILPOTT, JUSTIN M

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 04/23/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/493,338

Applicant(s)

TOPOREK ET AL.

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2-4</u> . | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. In the detailed description of the invention the specification recites, "reference may be had to Tim Strayer, 'A Brief Introduction to the Xpress Transport Protocol', which is incorporated herein by reference in its entirety for all purposes" (page 9, lines 23-25). However, specific cited reference to Strayer in the remaining pages of the specification (9-25) has not been provided, and thus, a distinction between Applicant's "Protocol Design" and "Xpress Transport Protocol" of the instant application and the "Xpress Transport Protocol" of Strayer has not been made by Applicant. Furthermore, the above-mentioned document by Strayer has not been provided by the Applicant (e.g., in the form of an Information Disclosure Statement), and therefore, this document has not been considered by the Examiner. In summary, the listing of the Strayer reference in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

2. The drawings are objected to by the Draftsperson for reasons cited on Form PTO 948 included herein. A proposed drawing correction or corrected drawings are required in reply to

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the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claim 1 is objected to because of the following informalities: “said telecommunications link” (line 18) should be changed to “said third telecommunications link” in order to properly distinguish this link from the first and second telecommunications links. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claims 2 and 8 recite the term “said telecommunications link” in claim 1. It is unclear whether claims 2 and 8 are referring to the first, second or third telecommunications link of claim 1. Applicant may overcome these rejections by amending claims 2 and 8 to change “said telecommunications link” to, e.g., “said third telecommunications link” and “said first telecommunications link”, respectively, if appropriate.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 5-13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,415,329 to Gelman et al.

Regarding claims 1, 8, 9 and 21, Gelman teaches a communication apparatus (FIG. 1) for transmitting packetized information, comprising a plurality of packets each comprising data and a header, over a satellite link (14) in a telecommunications system comprising a client (source/client 10; see also col. 7, line 31-32 regarding client/source), a server (destination/server 18; see also col. 7, lines 32-33 regarding destination/server), a first gateway (12) connected to the client (10) by a first telecommunications link (20), a second gateway (16) connected to the server by a second telecommunications link (24), and a third telecommunications link (22) connecting the first gateway (12) to the second gateway (16), and the apparatus comprising: a TCP network interface (260 in FIG. 12) for linking the first gateway (CG) with the client (CLIENT); a satellite gateway interface (262); a system memory (e.g., stored translation table; see col. 17, lines 29-44); and a bus (301) interconnecting the network interface (260), the satellite gateway interface (262), and the system memory with a processor (e.g., SNAT module), the processor operatively disposed to: intercept a connection with the server (18) initiated by the client (10); establish a connection between the first gateway (12) and the second gateway (16) over the [third]

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telecommunications link; and provide a bi-directional flow of information from the client (10) to the server (18) and from the server (18) to the client (10) using the connection between the first gateway (12) and the second gateway (16), wherein the providing a bi-directional flow occurs transparently to the client (10) and the server (18) (e.g., see col. 8, line 59 – col. 12, line 16; and col. 17, line 22 – col. 20, line 14 regarding operation of SNAT module). While Gelman may not specifically disclose selecting a client and server from a plurality of clients and servers, Gelman uses an example of a single client and a single server for the purpose of clearly explaining the communication method. The method of Gelman, however, teaches improved communication over a high-delay bandwidth (e.g., satellite) *network* which clearly suggests more than one client and more than one server may be utilized. Furthermore, it is well known in the art of satellite communications to select a client and server from a plurality of clients and servers.

Regarding claim 2, Gelman further teaches converting the information at the first gateway from a first protocol into a second protocol for transmission over the [third] telecommunications link, and converting the second protocol into the first protocol at the second gateway (e.g., see col. 2, lines 35-57).

Regarding claims 5-7, Gelman teaches converting comprises removing the header to leave the data, i.e. portion of the flow information, substantially intact and encapsulating the data using a satellite protocol header (e.g., see col. 5, lines 54-60; and col. 8, lines 17-20). While Gelman further teaches that additionally data *may* be compressed, encryption *may* be used, or the system may be implemented without making any changes to the code (col. 5, lines 60-67), such compression and encryption steps are not required by Gelman but are merely additional possible processes which may be implemented for particular purposes.

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Regarding claim 10, Gelman teaches the information comprises a client address and a destination server address (e.g., see col. 26, lines 11-13 regarding addressing information; see also cols. 7-31).

Regarding claims 11 and 12, Gelman further teaches transmitting a response (CONN\_ACK) from the second satellite gateway to the first satellite gateway, and from the first satellite gateway to the client, when the third communication connection with the destination server occurs (e.g., see col. 26, line 63 – col. 6).

Regarding claim 13, Gelman further teaches transmitting a failure response (CONN\_NAK) from the first satellite gateway to the client when the third communication connection is lost (e.g., see col. 27, lines 7-16).

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman in view of the article by Weaver entitled, “Xpress Transport Protocol Version 4” (IEEE, October 1995).

Regarding claims 3 and 4, while Gelman teaches the apparatus of claim 2 as discussed above and further teaches that the first protocol comprises TCP and the second protocol comprises a wireless protocol suitable for satellite communications (e.g., see col. 8, lines 10-13), Gelman may not specifically disclose that the second protocol comprises XTP.

Weaver teaches XTP and specifically, teaches the advantages provided by XTP such as multicast capability, multicast group management, priority capability, rate and burst control, selectable error control, selectable flow control and selective retransmission, among others (e.g., see sections 3.1 to 3.13). Even more specifically, Weaver teaches that features provided by XTP

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which are not provided by TCP are particularly desirable for satellite link communications (e.g., see section 3.8). Particularly, XTP provides for selective retransmission which provides much more efficient communications in high-delay bandwidth networks such as satellite links. As discussed above, Gelman teaches a second protocol is used for communications via a satellite link (i.e., the third telecommunications link). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the XTP teachings of Weaver to the system of Gelman wherein an XTP protocol is implemented as the second protocol for communications via the satellite link in order to provide more efficient communications in the high-delay bandwidth satellite link by utilizing selective retransmissions.

9. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman in view of U.S. Patent No. 6,324,582 to Sridhar et al.

Regarding claim 14, Gelman teaches the method as described above regarding claim 2, however, Gelman may not specifically disclose a plurality of second computers able to communicate with a first protocol and a plurality of second computers able to communicate with a second protocol, wherein a first computer communicates with one of the second computers.

Sridhar teaches an enhanced network communication wherein at least one of a plurality of second computers (server systems) is able to communicate with a first computer (client system) using a first protocol and at least one of the plurality of second computers (server systems) is able to communicate with the first computer (client system) using a second protocol. Sridhar further teaches determining whether a connection can be established between the first computer (client system) and at least one of the plurality of second computers (server system)



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using the first protocol and if the connection cannot be established then establishing a connection between the first computer (client system) and the at least one of the plurality of second computers (server system) using the second protocol, wherein e.g. a protocol selector determines an appropriate protocol for a suitable connection and e.g. a directory service module determines the appropriate server in accordance with the selected protocol (e.g., see col. 39, line 48 – col. 40, line 17). The teachings of Sridhar provide for improved throughput and latency in a communications network (e.g., see col. 10, lines 48-59). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize the teachings of Sridhar in the system of Gelman in order to provide improved throughput and latency in the communications network of Gelman.

Regarding claims 15 and 17, Sridhar teaches each of the plurality of second computers (servers) is able to communicate with the first computer (client) using the second protocol (e.g., TCP; see col. 8, lines 46-47).

Regarding claim 16, Sridhar teaches a first protocol is XTP (e.g., see col. 11, lines 37-45).

Regarding claims 18-20, while Sridhar may not specifically disclose specific throughput and corresponding bit error rate values of the first protocol (e.g., XTP) with respect to the second protocol (e.g., TCP), the throughput characteristics and corresponding bit error rate values recited in claims 18-20 are well known in the art for XTP and TCP communications.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,229,809 to Murphy et al. discloses a method and system for combining computer network protocols, and

the article by Voruganti et al. entitled, "Impact of Satellite Delay on Protocol Performance for ATM Traffic over Non-Processing Satellites" discloses TCP and XTP considerations.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

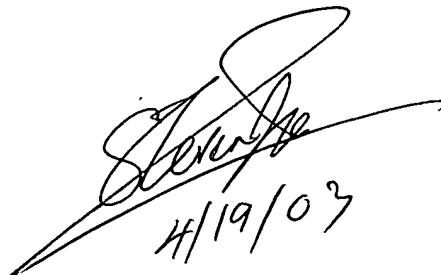
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott



April 17, 2003



4/19/03